Report Number: 98-12-01

Logistic Vehicle System Replacement Cost Estimate





Cost Analysis Division (AMSTA-RM-VC)

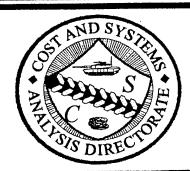
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14. ABSTRACT

The Logistics Vehicle System (LVS) was originally fielded from 1985-1989. Most of the LVS fleet will reach end-of-service life in 2005, therefore the goal of the Logistics Vehicle System Replacement (LVSR) program is to field a cost effective replacement for the LVS. The purpose of this study was to provide the costs associated with Research, Development, Test and Evaluation (RDT&E), procurement, and Operation and Maintenance (O&M) funded cost elements for the Marine Corps LVSR program. It compared High Technology (HT), Limited Technology (LT), Multi-Year Procurement (MYP) and Single-Year Procurement (SYP) for potential LVSR alternatives.

15. Subject Terms

Cost, HT, LT, MYP, and SYP.

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Logistics Vehicle System Replacement Cost Estimate

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elements								

LVSR (Limited Technology) Total RDT&E cost by year in escalated dollars
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Operations and maintenance related cost data sheets

LOGISTICS VEHICLE SYSTEM REPLACEMENT COST ESTIMATE

1. PURPOSE:

The purpose of this study is to provide the costs associated with: RDT&E, procurement, and O&M funded cost elements for the Marine Corps' Logistic Vehicle System Replacement (LVSR) program.

2. BACKGROUND:

The LVS was originally fielded from 1985-1989. Most of the LVS fleet will reach end-of-service life in 2005, therefore the goal of the LVSR program is to field a cost effective replacement for the LVS. This study looks at remanufacturing the Marine Corps' current MK48 Series LVS fleet. The MK48 Series LVS consists of a front power unit and rear body unit, connected by a center articulation joint. The MK48 series is comprised of the following models: MK48/14 - logistics platform truck; MK48/15 - recovery vehicle; MK48/16 - truck tractor; MK48/17 - cargo truck w/ material handing crane; MK48/18 - load handling system vehicle.

3. ACQUISITION STRATEGY:

Specific and detailed ground rules and assumptions on which the estimate is based are contained in the cost data sheets, in appendices A, B and C. The following is a list of pertinent general program assumptions:

- This study omits the costs incurred during Concept Exploration.
- The cost estimate was developed according to the acquisition strategy presented in Table 1. MSI/II occurs in July 01. Engineering and Manufacturing Development (EMD) is from FY01-FY03.
- RDT&E effort will consist of two contractors through EMD, each building.:

MK48/14 - 3 prototypes

MK48/15 - 1 prototype

MK48/16 - 1 prototype

MK48/18 - 1 prototype

- There will be a Source Selection and Evaluation Board to down-select to one contractor for the production phase. The winning contractor will build one MK48/17 prototype during low rate initial production (LRIP), with R&D funds.
- A total production quantity of 3,950 vehicles will be produced from FY04-08. LRIP will begin in Oct 03 (FY04) and continue until MSIII decision in Nov 05 (FY06).
 - In LRIP each type of variant will be built.
- The 3,950 production vehicles will be fielded from FY05-09. Full operational capability (FOC) occurs in the last quarter of FY08.
 - Useful life of the LVSR is 22 years.

Logistics Vehicle System Replacement

(LVSR)

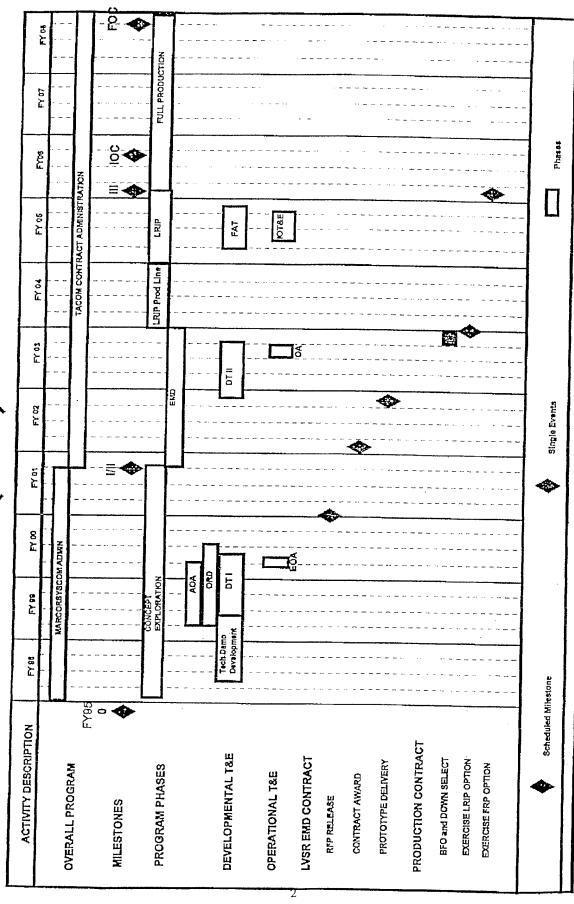


Table 1

• The annual operating miles are:

Mk48/14 - 5,000 Mk48/15 - 3,000 Mk48/16 - 6,000 Mk48/17 - 2,500 Mk48/18 - 6,000

4. COST APPROACH:

Two LVSR configurations were looked at in the study: a "limited technology" (LT) version; and a "high technology" (HT) version. Manufacturing costs were developed using a 5-single year procurement (SYP) approach and a 5 year multiyear procurement (MYP) approach. Each procurement approach was applied to the two LVSR configurations. Two rebuild options are presented in the Operations and Maintenance phase and applied to both LVSR configurations: 1) a rebuild effort after 10 years and; 2) no rebuild effort.

The Limited Technology and High Technology configurations of the LVSR were defined by the Nevada Automotive Test Center as follows:

System	LVSR- Limited Technology	LVSR – High Technology
Engine	Remanufacture existing engine	New Series 60
	w/ DDEC IIIa,	w/ DDEC IV,
	30 CFM air compressor,	30 CFM air compressor,
	Jacobs Brake	Jacobs Brake, cleanable filters
Transmission/T-Case	HD4070PR automatic	twin disc automatic
	transmission	transmission
	w/ integral retarder,	w/ integral retarder,
	twin disc single-speed T-Case	No T-Case required
Suspension	Walking Beam Air Ride	Independent suspension,
•	suspension,	w/ added 3 rd axle to RBU
	w/ added 3 rd axle to RBU	
Steering	Modify steering hydraulics.	Remove existing articulated joint.
	Add roll bump stop	Add all wheel steering
Tires/Wheels	16.00R20 Tires, Titan wheels and	16.00R20 Tires, Titan wheels and
Thesi Wheels	beadlocks	beadlocks
CTTO/A DO/A	N 100	
CTIS/ABS/Automatic Traction	Modify existing axles and wheel	Integrated into Oshkosh Truck
Control	ends	Company, Independent axles and wheel ends
		independent axies and wheel ends
Other Components:	Rebuild to original specifications	Rebuild to original specifications
Cooling, Prop shaft, Air dryer,	or replace with new	or replace with new
Engine accessories, Fasteners,		
Mounting HW, Axle refurbish		
New systems	Collision warning system	Collision warning system

5. RESULTS:

The remainder of this report presents the schedules and cost summaries for the LT and HT options of the LVSR.

The production and operating vehicle schedules are presented in Tables 2 and 3, respectively. Total costs are given in escalated and FY98 constant dollars in Tables 4 and 5. Table 6 provides a definition of what costs are included in each unit cost. The average unit costs for each LVSR variant are in Tables 7 - 12.

The appendices to this report are arranged by appropriation (RDT&E, procurement and O&M). Cost summaries are presented to their lowest level of detail and include all years in which costs are incurred. The summaries are followed by cost data sheets, which present the cost element description, assumptions and methodology.

Logistics Vehicle System Replacement (LVSR) Operating Schedule

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Operating Schedule - Active - MK48	80	295	857	606	606	606	606	606	606	606
Operating Schedule - Reserve - MK48				35	167	167	167	167	167	167
Operating Schedule - Training - MK48				99	99	99	99	99	99	99
								ļ		;
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Operating Schedule - Active - MK48	606	606	606	606	606	606	606	606	606	606
Operating Schedule - Reserve - MK48	167	167	167	167	167	167	167	167	167	167
Operating Schedule - Training - MK48	99	99	99	99	99	56	99	99	99	99
	í	i	1	í	i	1				
	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030				
Operating Schedule - Active - MK48	606	606	829	614	52					
Operating Schedule - Reserve - MK48	167	167	167	167	167	132				
Operating Schedule - Training - MK48	56	99	56	56	56					

Logistics Vehicle System Replacement (LVSR) Cost Estimate Summary

Escalated Dollars in Millions

7.5	FY01	FY02	FY03	FY04	FY05	FY01 FY02 FY03 FY04 FY05 FY06		FY07 FY08	FY09
1.0 EMD RDT&E Funded Elements Limited Tech High Tech	0.356 13.097 0.356 13.215	13.097	8.824	0.657					
2.0 Procurement Funded Elements Limited Tech (Single Year Procurement) High Tech (Single Year Procurement) Limited Tech (Multi-Year Procurement) High Tech (Multi-Year Procurement)				35.820 71.040 37.317 73.190 34.852 69.377 36.266 71.409		278.690 286.499 270.341 277.718	291.450 299.097 282.758 289.981	294.529 302.733 285.664 293.414	4.090 4.090 4.090 4.090
5.0 Operations & Maintenance Funded Elements with Rebuild without Rebuild					1.865 1.865	6.110	16.662	19.224 19.224	22.216 22.216

i mach	FY10	FY11	FY12	FY13	FY14	FY10 FY11 FY12 FY13 FY14 FY15	FY16 T/C	1/C	Total
1.0 EMD KDI&E Funded Elements Limited Tech									
High Tech									22.934 23.062
2.0 Procurement Funded Elements Limited Tech (Single Year Procurement) High Tech (Single Year Procurement) Limited Tech (Multi-Year Procurement) High Tech (Multi-Year Procurement)	0.960 0.988 0.960 0.988	0.981 1.010 0.981 1.010	1.002 1.032 1.002 1.032	1.024 1.055 1.024 1.055	1.047 1.078 1.047 1.078	1.070 1.102 1.070 1.102	1.093 1.126 1.093 1.126	15.943 16.413 15.943	998.739 1026.728 970.203 996.681
5.0 Operations & Maintenance Funded Elements with Rebuild without Rebuild	22.793 22.793	23.345 23.345	23.345 23.911 24.491 25.085 23.345 23.911 24.491 25.085	24.491	25.085 25.085	50.861 25.694	86.338 26.318	803.921 369.059	803.921 1126.820 369.059 606.773

Logistics Vehicle System Replacement (LVSR) Cost Estimate Summary

FY98 Constant Dollars in Millions

	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08	FYDG
1.0 EMD RDT&E Funded Elements									
Limited Tech High Tech	0.336	0.336 12.128	8.014						
	0.336	0.336 12.237	8.014	0.593					
2.0 Procurement Funded Elements									
Limited Tech (Single Year Procurement)				30 999	60 152	30 999 60 152 230 814 236 226	026 966		
High Tech (Single Year Procurement)				32.295	61.02	237 38E	240.279	233.042	3.1/4
Limited Tech (Multi-Year Procurement)						223.000	074.77		3.174
High Tech (Multi-Year Procurement)				31.386 60.464	50.464	223.330	223.522		3.1/4
)		200.103		707.707	3.174
5.0 Operations & Maintenance Funded Elements									
with Rebuild						1			
without Rehaild					1.586	5.106	13.597	15.317	17.282
					1.596	5.106	13.597	15.317	17.282

	FY10	FY11	FY12	FY13	FY14	FY10 FY11 FY12 FY13 FY14 FY15 FY16 T/C	FY16	T/C	Total
1.0 EMD RDT&E Funded Elements									Olai
Limited Tech									
High Tech									21.062
									21.180
2.0 Procurement Funded Elements									
Limited Tech (Single Year Procurement)	0.729	0.729	0.729	0 729	0 7 2 0	0.420	0 420	7	0
High Tech (Single Year Procurement)	0.750	0.750	0.750	0.750	0.750	0.750	0.750	9.132	809.395
Limited Tech (Multi-Year Procurement)	0 729	0.729	0 7 20	0.700	7 20	0.70	0.730	9.401	
High Toch (Multi-Veer Droet remont)	1 : 0	0.1.0	0.170	0.143	0.729	0.728	0.729	9.132	786.153
	0.750	0.750	0.750	0.750	0.750	0.750	0.750	9.401	807.633
5.0 Operations & Maintenance Funded Elements									
with Rebuild	17 319	17 319	47 240	17 210	17 310 17 310 17 310 17 210	0	1	0	· ·
without Rebuild	17.312	17.312	17.312	17.312 17.312 17.312	17.312	34.250 17.312	17.312	479.979 206.785	4/9.9/9 /10.497 206.785 380.865
									0

LVSR UNIT COST DEFINITIONS

Cell Number/Name	2.021 Manufacturing	
Unit Cost	Manufacturing	

Rollaway	Manufa	Manufacturing
	+ 2.03	Engineering Changes
	+ 2.04	System Engineering/Program Management
	+ 2.05	System Test & Evaluation
	+ 2.104	Transportation

Rollaway + 2.105 New Equipment Training	
Rollaway + 2.105 Ne	
Weapon System	

Weapon System	Procurement
+ 2.101 Initial DLRs (spares)	+ 1.0 RDT&E Funded Elements
Procurement + 2	Program Acquisition + 7

MK 48 Average Unit Costs FY98 Constant Dollars (Millions)

	LVSR-LT SYP	LVSR-LT MYP	LVSR-HT SYP	LVSR-HT MYP
Manufacturing	0.214	0.207	0.205	0.199
Rollaway	0.244	0.237	0.235	0.228
Weapon System	0.244	0.237	0.236	0.229
Procurement	0.245	0.237	0.236	0.229
Program Acq	0.247	0.239	0.238	0.231

MK 14 Average Unit Costs FY98 Constant Dollars (Millions)

	LVSR-LT SYP	LVSR-LT MYP	LVSR-HT SYP	LVSR-HT MYP
Manufacturing	0.087	0.083	0.105	0.100
Rollaway	0.113	0.109	0.132	0.126
Weapon System	0.113	0.109	0.132	0.127
Procurement	0.114	0.110	0.132	0.127
Program Acq	0.116	0.112	0.134	0.129

Table 8

MK 15 Average Unit Costs FY98 Constant Dollars (Millions)

	LVSR-LT SYP	LVSR-LT MYP	LVSR-HT SYP	LVSR-HT MYP
Manufacturing	0.188	0.185	0.206	0.201
Rollaway	0.218	0.213	0.236	0.231
Weapon System	0.218	0.214	0.236	0.231
Procurement	0.218	0.214	0.236	0.231
Program Acq	0.220	0.216	0.238	0.233

Table 9

MK 16 Average Unit Costs FY98 Constant Dollars (Millions)

	LVSR-LT SYP	LVSR-LT MYP	LVSR-HT SYP	LVSR-HT MYP
Manufacturing	0.110	0.106	0.128	0.123
Rollaway	0.137	0.133	0.155	0.150
Weapon System	0.137	0.133	0.156	0.150
Procurement	0.137	0.133	0.156	0.151
Program Acq	0.139	0.135	0.158	0.153

Table 10

MK 17 Average Unit Costs FY98 Constant Dollars (Millions)

	LVSR-LT SYP	LVSR-LT MYP	LVSR-HT SYP	LVSR-HT MYP
Manufacturing	0.178	0.175	0.196	0.191
Rollaway	0.207	0.203	0.226	0.220
Weapon System	0.207	0.203	0.226	0.221
Procurement	0.208	0.203	0.226	0.221
Program Acq	0.209	0.205	0.228	0.222

Table 11

MK 18 Average Unit Costs FY98 Constant Dollars (Millions)

i.	LVSR-LT SYP	LVSR-LT MYP	LVSR-HT SYP	LVSR-HT MYP
Manufacturing	0.187	0.181	0.204	0.198
Rollaway	0.216	0.210	0.234	0.227
Weapon System	0.216	0.210	0.235	0.227
Procurement	0.216	0.210	0.235	0.228
Program Acq	0.218	0.212	0.237	0.230

Table 12

APPENDIX A

LVSR (Limited Technology & High Technology)

Total R&D Costs by Year in Escalated Dollars

R&D – Cost Data Sheets

Logistics Vehicle System Replacement (LVSR) - LT RDTE Funded Elements

Escalated Dollars in Millions

	FY01	FY02	FY03	FY04	Total
1.0 EMD RDT&E Funded Elements	0.356	13.097	8.824	0.657	22.934
1.01 Development Engineering		3.439	1.806		5.245
1.04 Prototype Manufacturing MK48 MK14 MK15 MK16 MK17 MK17		5.083 3.353 0.619 0.440 0.250		0.501 0.291 0.210	5.584 3.644 0.619 0.440 0.250 0.210
 1.05 System Engineering/Program Management 1.051 Government Engineering/Mgmt Government Core PM Government Matrix Support Other Government 1.052 Contractor Engineering/Mgmt Contractor PM Contractor ILS 	0.356 0.356 0.312 0.021 0.023	2.937 1.266 0.318 0.092 0.857 1.671 0.580	2.271 1.502 0.840 0.085 0.577 0.769 0.710		5.564 3.125 1.471 0.197 1.457 2.439 1.291
 1.06 Systems Test & Evaluation 1.061 Government Testing		1.639 0.660 0.245 0.275 0.141 0.978 0.864	4.746 3.639 1.137 1.275 0.572 0.655 1.107 0.531	0.156 0.156 0.156	6.540 4.299 1.382 1.550 0.572 0.796 2.241 1.020 0.645

Logistics Vehicle System Replacement (LVSR) - HT RDTE Funded Elements

Escalated Dollars in Millions

-	FY01	FY02	FY03	FY04	Total
1.0 EMD RDT&E Funded Elements	0.356	13.215	8.824	0.667	23.062
1.01 Development Engineering		3.439	1.806		5.245
1.04 Prototype Manufacturing MK48 MK14 MK15 MK16		5.193 3.240 0.730 0.477		0.511 0.281 ⁺	5.703 3.521 0.730 0.477 0.287
MK17 MK18		0.458		0.229 🤻	0.229
1.05 System Engineering/Program Management 1.051 Government Engineering/Mgmt Government Core PM Government Matrix Support Other Government Coher Government Contractor Engineering/Mgmt Contractor ILS	0.356 0.356 √ 0.312 0.021 0.023	2.945 1.274 0.318 0.092 0.865 1.671 0.580	2.271 1.502 0.840 0.085 0.577 0.769 0.710		5.572 3.133 1.471 0.197 1.465 2.439 1.291
 1.06 Systems Test & Evaluation 1.061 Government Testing Development Test - Performance Development Test - Endurance Operational Assessment I Government Test Support 1.062 Contractor Testing Contractor Testing - (all variants) Contractor Testing - (all variants) SSP 	all 1	1.639 0.660 0.245 \(\nu \) 0.275 \(\nu \) 0.978 0.978 0.864 \(\nu \)	4.746 3.639 1.137 1.275 0.572 1.107 0.655	0.156 0.156 0.156 0.156 0.156 75% ort	6.540 4.299 1.382 1.550 0.572 0.796 2.241 1.020 0.645

1.01 EMD Development Engineering

Description:

This element includes the engineering tasks associated with the study, analysis, and development of upgrading/redesigning an existing vehicle system. It includes upgrading existing components and incorporating new components/technologies. Also included in this element is the cost of ensuring the producibility of the system.

Assumptions:

Methodology:

Development engineering cost was computed by analogy to the MTVR program. MTVR costs were adjusted for the longer period of performance in the LVSR program.

1.04 EMD Prototype Manufacturing

Description:

This element includes the costs of material, labor and other expenses incurred with the tasks of teardown, rebuild, reassemble, and integration of the various subassemblies into the specified prototype.

Assumptions:

It was assumed that the various new components for the remanufactured vehicle will be commerically available nondevelopmental items. Therefore the prototype component costs will be equivalent to the production component costs.

Number of required prototypes:

MK48/14 - 3 prototypes MK48/15 - 1 prototype MK48/16 - 1 prototype MK48/17 - 1 prototype (during LRIP, FY04) MK48/18 - 1 prototype

Methodology: (per variant)

The derivation of the prototype cost was divided into three areas:

1) the component cost for the new/upgraded parts; 2) the cost to rebuild/rework; and 3) the cost to teardown and reassemble.

The component cost; cost to rebuild; and manufacturing labor rate are equivalent to the costs/rates used in developing the unit manufacturing cost.

Prototype manufacturing labor hours (cost to teardown and reassemble) were developed using the production manufacturing labor hours as a baseline and applying an in-house historical production-to-prototype ratio.

1.051 EMD System Engineering/Management - Government

Description:

This element includes the RDT&E funded costs of the government PM's office and the government's matrix support for system engineering and business management of the system/program. This element also includes the cost of holding a SSEB to downselect for LRIP.

Assumptions:

PM positions are paid with RDT&E funds through FY03.

The PM is in existence one year prior to the signing of EMD contract.

Methodology:

Both the core PM and the matrix support costs were derived from the LSV program and adjusted to reflect the requirements of the LVSR program.

Resulting cost includes three manyears for the core PM and three manyears for matrix support.

The cost for a SSEB was developed by analogy to the AGS SSEB. The AGS SSEB cost was adjusted to reflect the period of performance required in the LVSR program.

1.052 EMD System Engineering/Management - Contractor

Description:

This element includes the RDT&E funded costs of the contractor's PM office; and the contractor's ILS effort.

It includes costs for data items such as supplements to existing manuals or new manuals, but excludes TDP costs.

Assumptions:

Methodology:

The contractor PM cost was developed as a cost per month and applied to the EMD contract period of performance. The contractor PM cost per month and the contractor's ILS effort were based on analogy to the MTVR program.

1.061 EMD System Test and Evaluation - Government

Description:

EMD government testing includes:

- Development testing consisting of performance and endurance testing
- Operational Assessment 1 (OA1)
- Government test support

Assumptions:

- Performance testing will utilize 3 vehicles; 1 MK48/15, 1 MK48/16, and 1 MK48/18.
- Endurance testing will utilize 3 MK48/14 vehicles. Each vehicle will operate for 6,000 miles for a total of 18,000 miles.
- OA1 testing will utilize 6 EMD prototype vehicles; 3 MK48/14, 1 MK48/15, 1 MK48/16, and 1 MK48/18.

Methodology:

All government test cost were based on analogy to the MTVR program. The performance test cost was adjusted for the quantity of test vehicles and the endurance test cost was adjusted for the total number of endurance test miles.

1,062 EMD System Test and Evaluation - Contractor

Description:

EMD contractor testing includes:

- Contractor "break-in/run-in" of each prototype vehicle prior to official delivery
- Contractor support to government development testing and operational assessment
- System support package (SSP) for development testing and operational assessment

Assumptions:

The contractor will provide 14 months of test support for development testing and operational assessment.

Methodology:

Both the contractor "break-in/run-in" and SSP costs were based on analogy to the MTVR program. The contractor support cost was developed as a cost per month applied to the number of months of test support. The cost per month was based on analogy to the LSV program.

APPENDIX B

LVSR (Limited Technology & High Technology)

Total Procurement Costs by Year in Escalated Dollars

Procurement - Cost Data Sheets

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Logistics Vehicle System Replacement (LVSR) - LT (SYP) Procurement Funded Elements

Escalated Dollars in Millions

Page 1 of 3

2.0 Procurement Funded Elements	FY04 35.820	FY05 71.040	FY06 278.690	FY07 291.450	FY08 294.529	FY09 4.090	FY10 0.960	FY11 0.981	FY12 1.002	FY13	FY14 1.047
	29.719 29.719 13.612 2.216 3.702 2.546 2.679 4.964	48.093 48.093 25.295 5.147 1.113 4.555 3.159 8.824	245.468 245.468 144.758 23.565 12.510 15.958 19.370 29.307	255.175 255.175 150.590 21.504 5.812 14.951 21.996 40.322	257.697 257.697 153.899 23.734 1.901 22.086 24.053 32.024					† † † † † † † † † † † † † † † † † † †	110:1
	0.892	1.443	7.364	7.655	7.731						
stem Engineering/MGM I 2.041 Government Sys Engineering/Mgmt Government Core PM Government Matrix Support Other Government Contractor Sys Engineering/Mgmt Contractor PM Contractor ILS	4.434 2.990 0.340 0.307 2.343 1.444 0.409	6.485 5.299 0.348 0.304 4.647 1.186 0.418	20.110 18.898 0.355 0.311 18.232 1.212 0.427	20.986 19.748 0.363 0.318 19.067 1.239 0.437	21.230 19.964 0.371 0.325 19.268 1.266 0.447	0.979 0.979 0.379 0.332 0.268					
em Test and Evaluation 151 Government Testing FPV! Corrosion Testing IOT&E 152 Contractor Testing Comparison Test PVT Refurb ContractorTest Support - IOT&E ContractorTest Support SSP		13.129 10.028 0.079 6.909 1.285 1.754 3.102 0.276 1.291 0.482 0.124 0.622	0.307 0.282 0.004	0.313 0.288 0.004	0.320 0.294 0.004						
	0.775 0.359 0.415	1.890 0.367 1.306 0.216	5.441 0.375 4.844 0.221	7.320 7.094 0.226	7.551 7.320 0.231	3.111 2.875 0.236					
							0.960	0.981	1.002	1.024	1.047

Logistics Vehicle System Replacement (LVSR) - LT (SYP) Procurement Funded Elements

Page 2 of 3

FY24

FY23

1.246 FY22

1.219 FY21

1.167

1.142 FY18

FY20

FY19

FY17

FY16

FY15

Escalated Dollars in Millions

2.02 Recurring Production 2.021 Manufacturing

2.0 Procurement Funded Elements

MK48

Mk14 Mk15 Mk16

Mk17 Mk18

2.03 Engineering Changes

2.04 System Engineering/MGMT

2.041 Government Sys Engineering/Mgmt

Government Core PM

Government Matrix Support Other Government

B-3

2.042 Contractor Sys Engineering/Mgmt

Contractor PM Contractor ILS

2.051 Government Testing 2.05 System Test and Evaluation

FPVI PVT

Corrosion Testing

10T&E

2.052 Contractor Testing

Comparison Test PVT Refurb

IOT&E Refurb

ContractorTest Support - IOT&E

Contractor Test Support

2.10 Fielding

2.101 Initial Spares/Consumables

2.104 Transportation

2.105 New Equip Training (NET)

2.13 Modifications

1.193 1.167 1.142 1.118 1.093 1.070

1.301

1.273

1.246

1.219

Logistics Vehicle System Replacement (LVSR) - LT (SYP) Procurement Funded Elements

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FY26 FY27 FY28 F Imments 1.330 1.359 1.317 1.176 IGMT Sys Engineering/Mgmt Active PM Active PM				à	Page 3 of 3			
1.330 1.359 1.317 1.176 spoot seering/Mgmt T.330 1.359 1.317 1.176		FY25	FY26	FY27	FY28	FY29	FY30	TOTAL
IGMT One PM Matrix Support ment F. Engineering/Mgmt A S S S S S S S S S S S S S S S S S S	.0 Procurement Funded Elements	1.330	1.359	1.317	1.176	0.767	0.334	998.739
IGMT Sys Engineering/Mgmt Sore PM Matrix Support ment I S Subject of the string of the	.02 Recurring Production							
gineering/Mgmt Jupport ineering/Mgmt IOT&E	2 021 Manufacturing							836.152
IGMT Sys Engineering/Mgmt Jone PM Watrix Support ment ys Engineering/Mgmt S S Substance Seting Seting Seting Sting Mables Mables (NET)	S							836.152
IGMT Sys Engineering/Mgmt Sore PM Matrix Support I/s Engineering/Mgmt I/	WK48							488,153
IGMT Sys Engineering/Mgmt Oore PM Matrix Support ment A F Engineering/Mgmt S S S S S S S S S S S S S S S S S S S	MK14							76 166
IGMT Sys Engineering/Mgmt Sore PM Ment As Engineering/Mgmt As Engi	Mk15							00.00
tGMT Sys Engineering/Mgmt Sone PM Matrix Support Menting Mgmt A S S S S S S S S S S S S S S S S S S	MK16							720.037
tGMT Sys Engineering/Mgmt Sone PM Watrix Support In Sengineering/Mgmt Is Engineering/Mgmt Is Engineering/M	M1:17							960.09
Sys Engineering/Mgmt Sone PM Watrix Support Ment S S Sengineering/Mgmt S S Sting Sting Sting Mmables MET)	/ NIV							71.257
Sys Engineering/Mgmt Sore PM Matrix Support Ment S S Sengineering/Mgmt I S S Sting Sting Sting Mmables Matrix Matr	MK18							115.442
gineering/Mgmt Support ineering/Mgmt IOT&E	.03 Engineering Changes							25.085
gineering/Mgmt Support Ineering/Mgmt IOT&E	.04 System Engineering/MGMT							1
UDport	2 Odd Government Sun Businessins Manual							74.225
Support ineering/Mgmt	Coveringent by Engineering/high							67.878
ineering/Mgmt IOT&E	Government Core PM							2.157
ineering/Mgmt	Government Matrix Support							1.896
ineering/Mgmt IOT&E	Other Government							63 825
IOT&E	2.042 Contractor Sys Engineering/Mamt							20.00
IOT&E	Contractor PM							6.347
rector its ment Testing Testing Testing Test Support - IOT&E Test Support Test Support Training (NET)	O II referented							2.138
IOT&E	COINTACTOR ILS							4.208
IOT&E	.05 System Test and Evaluation							
Spares/Consumables Special Training (NET)								14.070
osion Testing XE Contractor Testing parison Test Refurb XE Refurb tractorTest Support - IOT&E tractor Test Support Spares/Consumables portation Equip Training (NET)	z.uɔi Government lesting							10.028
osion Testing XE Contractor Testing parison Test Refurb XE Refurb Itractor Test Support - IOT&E Itractor Test Support Spares/Consumables portation Equip Training (NET)	DAT							0.079
osion Testing XE Contractor Testing sparison Test Refurb KE Refurb Iractor Test Support - IOT&E Iractor Test Support Spares/Consumables portation Equip Training (NET)	PVT							9/9:9
Sontractor Testing Sontractor Testing sparison Test Refurb Itractor Test Support - IOT&E Itractor Test Support Spares/Consumables portation Equip Training (NET)	Corrosion Testing							
Contractor Testing parison Test Refurb IractorTest Support - IOT&E Iractor Test Support Spares/Consumables portation Equip Training (NET)	IOT&E							1.203
pparison Test Refurb tractorTest Support - IOT&E tractor Test Support Spares/Consumables portation Equip Training (NET)	2.052 Contractor Testing							407.1
Refurb REfurb AE Refurb Aractor Test Support - IOT&E Aractor Test Support Beach Training (NET)	Comparison Toot							4.042
Keturb tractorTest Support - IOT&E tractor Test Support Spares/Consumables portation Equip Training (NET)	Collibation 168							1.140
SE Refurb tractor Test Support - IOT&E tractor Test Support Spares/Consumables portation Equip Training (NET)	TVI Keturo							1.291
tractor Test Support - IOT&E tractor Test Support Spares/Consumables action Equip Training (NET)	IOT&E Refurb							0.482
tractor Test Support Spares/Consumables portation Equip Training (NET)	ContractorTest Support - IOT&E							0.104
Spares/Consumables Equip Training (NET)	Contractor Test Support							0.124
Spares/Consumables portation Equip Training (NET)	SSP							0.635
Spares/Consumables portation Equip Training (NET)								0.369
s/Consumables on Training (NET)	2.10 Fielding							26.087
on Training (NET)	2.101 Initial Spares/Consumables							1 400
Training (NET)	2.104 Transportation							201.102
	ining (1 131
1.330 1.359 1.317 1.176	2.13 Modifications	1.330	1.359	1.317	1.176	0.767	0.334	23 119

Logistics Vehicle System Replacement (LVSR) - HT (SYP) Procurement Funded Elements

Escalated Dollars in Millions Page 1 of 3

FY13	1.055					
FY12	1.032		A Company of the Company			
FY11	1.010					
FY10	0.988) a 40%			
FY09	4.090		()	0.979 0.979 0.379 0.332 0.268		3.111 2.875 0.236
FY08	302.733	265.141 265.141 147.525 28.502 2.077 25.595 26.415 35.026	7.954	20.501 20.501 0.371 0.325 19.805 1.266 0.447	0.320 0.320 0.294 0.004	7.551 7.320 0.231
FY07	299.097	262.113 262.113 144.354 25.823 6.352 17.327 24.156 44.101	7.863	21,487 20.248 0.363 0.318 19.567 1.239 0.437 0.802	0.313	7.320 7.094 0.226
FY06	286.499	252.554 252.554 138.763 28.298 13.672 18.494 21.272 32.054	7.577	20.621 19.409 0.355 0.311 18.743 1.212 0.427	0.307 0.307 0.282 0.004	5.441 0.375 4.844 0.221
FY05	73.190	50.044 50.044 24.247 6.181 1.216 5.278 3.469	1.501	6.626 5.440 0.348 0.304 4.788 1.186 0.418	73.129 10.028 0.079 6.909 1.285 1.754 1.291 0.1282 0.1282 0.0522 0.0522	1.890 0.367 1.306 0.216
FY04	37.317	8 8 8 8 7 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.932	4.532 3.088 0.340 0.307 2.441 1.444 0.409 v	Jone 15 Por	0.775 0.359 V 0.415 V
	2.0 Procurement Funded Elements	2.02 Recurring Production 2.021 Manufacturing MK48 MK14 MK15 MK16 MK17 MK18	2.03 Engineering Changes	2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM Government Matrix Support Other Government 2.042 Contractor Sys Engineering/Mgmt Contractor PM Contractor PM Contractor ILS	2.05 System Test and Evaluation 2.051 Government Testing	2.10 Fielding 2.101 Initial Spares/Consumables 2.104 Transportation 2.105 New Equip Training (NET)

1.055

1.032

1.010

0.988

2.13 Modifications

Logistics Vehicle System Replacement (LVSR) - HT (SYP) Procurement Funded Elements

Escalated Dollars in Millions

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	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
2.0 Procurement Funded Elements	1.078	1.102	1.126	1.151	1.176	1.202	1.228	1.255	1.283	1.311	1.340
2.02 Recurring Production 2.021 Manufacturing Mk48 Mk14 Mk15 Mk16 Mk17 Mk17 Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT Covernment Core Production Changes		1 2 :	2.	2	o - - -	707.	977	667	7.283	1.31	1.340
Soverninent Matrix Support Other Government Contractor Sys Engineering/Mgmt Contractor PM Contractor ILS											
2.05 System Test and Evaluation 2.051 Government Testing											
2.13 Modifications	1.078	1.102	1.126	1.151	1.176	1.202	1.228	1.255	1.283	1.311	1.340

Logistics Vehicle System Replacement (LVSR) - HT (SYP) Procurement Funded Elements

Escalated Dollars in Millions Page 3 of 3

	FY25	FY26	- FY27	FY28	FY29	FY30	TOTAL
2.0 Procurement Funded Elements	1.369	1.400	1.355	1.209	0.789	0.344	1026.728
2.02 Recurring Production							860 929
2.021 Manufacturing							860 929
WK48							000.043
							407.938
MK14							91.466
MK15							27.363
Mk16							60 646
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7							09:040
MK1 /							78.254
MK18							126.263
2.03 Engineering Changes							25.828
2.04 System Engineering/MGMT							76.012
2.041 Government Sys Engineering/Mgmt							69.665
Government Core PM							2.157
Government Matrix Support							1.896
Other Government							65.612
2.042 Contractor Sys Engineering/Mgmt							6.347
Contractor PM							2 138
Contractor II S							7 208
							4.500
2.05 System Test and Evaluation							14 070
2 Off Covernment Teeting							0.00
							10.028
\rightarrow							0.079
PVT							6.909
Corrosion Testing							1.285
IOT&E							1 754
2.052 Contractor Testing							000
							4.042
Comparison Test							1.140
PVT Refurb							1.291
IOT&E Refurb							0.482
ContractorTest Support - IOT&F							1010
town of the Proposition O							0.124
Confidence lest support							0.635
SSP							0.369
2.10 Fielding							78.087
2 101 Initial Spares/Consumables							1 102
2 104 Transportation							701.102
2.105 New Equip Training (NET)							1.131
2.13 Modifications	1.369	1.400	1.355	1.209	0.789	0.344	23.803

Logistics Vehicle System Replacement (LVSR) - LT (MYP) Procurement Funded Elements

Millions
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Dollars
Escalated

		ш	Page 1 of 3								
	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	F\13	> 1
2.v Procurement Funded Elements	34.852	69.377	270.341	282.758	285.664	4.090	0.960	0.981	1.002	1.024	1.047
2.02 Recurring Production	78 845	76.530	000		:						
2.021 Manufacturing	20.07	40.039	237.555	247.051	249.412						
07.294	28.815	46.539	237.666	247.051	249,412						
MINT O	13.170	24.473	140.056	145.699	148.900						
1VIX 14	2.120	4.925	22.550	20.577	22.712						
MK15	3.628	1.091	12.261	5.696	1.863						
MK16	2.460	4.399	15,415	14.441	21.333						
Mk17	2.622	3.092	18.962	21.533	23 547						
MK18	4.814	8.558	28.423	39.105	31.057						
2.03 Engineering Changes	0.892	1.443	7.364	7.655	7.731						
2.04 System Engineering/MGMT	A 274	7400	2								
2.041 Government Svs Engineering/Momt	1.57	0.377	19.554	20.418	20.650	0.979					
Government Core PM	0.340	0.13	18.352	19.179	19.384	0.979					
	0.340	0.348	0.355	0.363	0.371	0.379					
Other Government	0.307	0.304	0.311	0.318	0.325	0.332					
2.042	1 444	4.009	17.080	18.498	18.688	0.268					
Contractor PM	0.409	0.418	1.2.1	1.239	1.266						
Contractor ILS	1.035	0.768	0.784	0.802	0.819						
2.05 System Test and Evaluation		,									
2.051 Government Testing		13.129	0.307	0.313	0.320						
FPVI		0.020									
PVT		6,0,0									
Corrosion Testing		1 285									
IOT&E		1 754									
2.052 Contractor Testing		3 102	7020	0.240	0						
Comparison Test		0.276	0.000	0.0.0	0.320						
PVT Refurb		1 291	0.502	0.400	0.234						
IOT&E Refurb		0.482									
ContractorTest Support - IOT&E		0.124									
Contractor Test Support		0.622	7000	0	0						
SSP		0.306	0.021	0.021	0.004						
2.10 Fielding	1	9		ļ							
2.101 Initial Spares/Consumables	0.775	1.890	5.441	7.320	7.551	3.111					
2.104 Transportation	0.500	1 308	0.00	4	1	1					
2.105 New Equip Training (NET)	5	0.216	0.221	0.226	7.320 0.231	2.875 0.236					
2 13 Modifications											
							0.960	0.981	1.002	1.024	1.047

Logistics Vehicle System Replacement (LVSR) - LT (MYP) Procurement Funded Elements

Escalated Dollars in Millions

Page 2 of 3

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
2.0 Procurement Funded Elements	1.070	1.093	1.118	1.142	1.167	1.193	1.219	1.246	1.273	1.301	1.330
2.02 Recurring Production 2.021 Manufacturing Mk48 Mk14 Mk15 Mk16 Mk17											
2.03 Engineering Changes											
2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM Government Matrix Support Other Government Contractor Sys Engineering/Mgmt Contractor PM Contractor PM											
2.05 System Test and Evaluation 2.051 Government Testing											
2.13 Modifications	1.070	1.093	1.118	1.142	1.167	1.193	1.219	1.246	1.273	1.301	1.330

Logistics Vehicle System Replacement (LVSR) - LT (MYP) Procurement Funded Elements

Escalated Dollars in Millions

Page 3 of 3

2.02 Procurement Funded Elements 1.239 1.217 1.726 1.739 1.739 1.700 (1.701 (1.702 (1.	2.0 Procurement Funded Elements 2.02 Recurring Production 2.021 Manufacturing Mk48 Mk14 Mk15 Mk16 Mk17 Mk17 Ak17 L.03 Engineering Changes 2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM	1.359	1.317	1.176	6.767 0.767	6.334	TOTAL 970.203
2.02 Recurring Production 2.02 Maunisturing MA48 MA14 MA15 MA16 MA17 MA18 MA17 MA18 2.03 Engineering Changes 2.04 System Engineering Matrix Support Government Matrix Support Contractor PM Contractor Testing PFV PV PV PV Corrosion Testing Companion 2.05 System Test and Evaluation 2.05 System Test sting Companion 2.06 Felding PVI Refutb Contractor Testing Contrac	2.02 Recurring Production 2.021 Manufacturing Mk48 Mk14 Mk15 Mk16 Mk17 Mk17 Ak18 2.03 Engineering Changes 2.04 System Engineering/MGMT Covernment Sys Engineering/Mgmt Government Core PM	ρος: -	1.317	1.176	0.767	0.334	970.203
2.02 Recurring Production 2.02 Maria Manufacturing Maria Mar	2.02 Recurring Production 2.021 Manufacturing Mk48 Mk14 Mk15 Mk16 Mk17 Mk17 Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM						
2.02 Manufacturing Mix4 Mix4 Mix8 Mix8 Mix8 Mix8 Mix8 Mix8 Mix8 Mix8	2.021 Manufacturing Mk48 Mk14 Mk15 Mk16 Mk17 Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT Covernment Sys Engineering/Mgmt Government Core PM						
### #### #############################	2.04 System Engineering/MGMT 2.04 Sovernment Sys Engineering/Mgmt Government Core PM						809.482
Mix48 Mix48 Mix18 Mix18 Mix18 Mix18 Mix18 2.03 Engineering Changes 2.04 System Engineering/Mgmt Contractor Sys Engineering/Mgmt Contractor Testing Contractor Testing Contractor Testing Contractor Testing Contractor Test Support Sys 2.101 Intillal Sparses/Consumables 2.101 Intillal Sparses/Consumables 2.101 Intillal Sparses/Consumables 2.103 New Equip Training (NET) 2.138 Modifications 1.359 1.317 1.176 0.787 0.334	Mk48 Mk14 Mk15 Mk16 Mk17 Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT Covernment Sys Engineering/Mgmt Government Core PM						809,482
MK14 MK16 MK16 MK17 ACT Covernment Sperioring/Mgmt Contractor Sys Engineering/Mgmt Contractor Test Engineering/Mgmt Contractor Testing Contractor Test Support - IOT&E Contractor Test Support SSP 2.101 Finding 2.101 Tansportation 2.105 New Equip Training (NET) 2.13 Modifications 1.359 1.317 1.176 0.767 0.334	Mk14 Mk15 Mk16 Mk17 Mk17 Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT Covernment Sys Engineering/Mgmt Government Core PM						472 200
MAT 16 MAT 18 MAT 18 MAT 18 2.03 Engineering Changes 2.04 System Engineering/MGMT 2.04 Government Sys Engineering/Mgmt Government Sys Engineering/Mgmt Government Matrix Support Other Contractor PM Contractor PM Contractor PM Contractor LS 2.05 System Test and Evaluation 2.05 Government Testing PVT Corrosion Testing Comparison Test Syr Contractor Testing Contractor Test	Mk15 Mk16 Mk17 Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT Covernment Sys Engineering/Mgmt Government Core PM						067.71
Wk/16 Wk/17 Wk/17 Wk/17 Wk/17 Wk/17 Wk/17 Wk/17 2.04 System Engineering/MgMT 2.042 Contractor Cove PM Government Advis Support 2.042 Contractor PM Contractor PM Contractor PM Contractor PM Contractor PM Contractor Test and Evaluation 2.05 System Test and Evaluation 2.05 Government Testing PVT Corresion Testing FVT Corresion Testing FVT Corresion Testing FVT Contractor Test Support FREAUT IOT&E Refurb Contractor Test Support Contractor Test Support 2.10 Fielding 2.10 Initial Spares/Consumables 2.105 New Equip Teaning (NET) 2.105 New Equip Training (NET) 2.105 New Equip Training (NET) 2.106 New Equip Training (NET) 2.107 Medications 2.107 Middlications 2.107 Middlications 3.107 Middlications 3.107 Middlications 4.107 Middlications 4.107 Middlications 4.107 Middlications 4.107 Middlications 4.107 Middlications	2.03 Engineering Changes 2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM						72.885
MK17 MK18 MK18 2.03 Engineering Changes 2.04 Systom Engineering/Mgmt 2.04 Government Sys Engineering/Mgmt Covernment after Support Other Government Matrix Support Other Government Matrix Support Contractor PM Contractor PS SS Contractor Testing PVT Refurb IOTRE 2.03 Contractor Testing Comparison Test PVT Refurb IOTRE 2.03 Contractor Test Support SSP Contractor Test Support SSP Contractor Test Support SSP 2.101 Inflait Speres/Consumables 2.105 New Equip Training (NET) 2.13 Modifications 1.359 1.317 1.176 0.267 0.2767 0.234	Mk18 Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM						24.538
Mk17 Mk18 Mk18 Mk18 2.04 Systom Engineering/Mgmt Covernment Asix Engineering/Mgmt Government Asix Engineering/Mgmt Government Covernment Testing Covernment Testing PVT Corrosion Testing PVT Corrosion Testing PVT Corrosion Testing Corrosion Testing Corrosion Testing Corrosion Covernment Covern	Mk18 Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM						58.048
2.03 Engineering Changes 2.04 Systom Engineering/MGMT 2.04 Government Sys Engineering/Mgmt Government Sys Engineering/Mgmt Government Sys Engineering/Mgmt Government Matrix Support Contractor Sys Engineering/Mgmt Contractor Sys Engineering/Mgmt Contractor Sys Engineering/Mgmt Contractor Testing FPVI PVI Corrosion Testing FPVI Contractor Testing FPVI Contractor Testing Contractor Testing Contractor Test Support SSP 2.10 Frielding 2.10 Initial Spares/Consumables 2.105 New Equip Training (NET)	Mk18 2.03 Engineering Changes 2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM						60.356
2.04 System Engineering Changes 2.04 System Engineering/MGMT 2.04 Government Sys Engineering/Mgmt Government Core PM Contractor Its 2.054 Government Tosting FPVI Corrosion Testing Contractor Test Support - IOT&E Contractor Test Support SSP 2.10 Fielding 2.10 Fielding 2.10 Fielding 2.11 Initial Spares/Consumables 2.105 New Equip Training (NET) 2.113 Modifications 4.136 New Equip Training (NET) 4.137 1.176 0.787 0.334	2.03 Engineering Changes 2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM						111.957
2.04 System Engineering/Mgmt 2.04 Government Sys Engineering/Mgmt Government Matix Support Government Matix Support Other Government Matix Support Other Government Matix Support Contractor Sys Engineering/Mgmt Contractor PM Contractor PM Contractor PM Contractor PM Contractor Testing FPV PVT Corrosion Testing Comparison Test PVT FRefurb Ornparison Test Contractor Testing Comparison Test PVT Refurb IOTAE Fedurb Contractor Test Support IOTAE Fedurb Contractor Test Support SSP 2.101 Initial Spares/Consumables 2.104 Transportation 2.105 New Equip Training (NET) 2.113 Modifications 2.113 Modifications 2.113 Modifications 2.114 Testing Contractor Test Support Contractor Test Support SSP 2.115 New Equip Training (NET) 2.115 New Equip Training (NET) 2.117 1.176 0.767 0.334	2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM						25.085
2.041 Government System Covernment Marix Support Contractor Sys Engineering/Mgmt Contractor Testing FPVI PVT Corrosion Testing FPVI PVT Corrosion Testing Corrector Testing Comparison Test PVT Refurb IOTRE Refurb Contractor Test Support - IOTRE Contractor Test Support SysP Contractor Test Support Contractor Test Support SysP Contractor Test Support Contractor Test Support Contractor Test Support Contractor Test Support SysP Contractor Test Support Contractor Test Sup	2.041 Government Sys Engineering/Mgmt Government Core PM						
Contractor Testing Contractor Testing Contractor Sys Engineering/Mgmt Contractor Testing FPVI Contractor Testing IOT&E 2.052 Contractor Testing Comparison Test PVT Comparison Test Contractor Testing IOT&E 2.052 Contractor Testing Contractor Test Support Sys Contractor Test Support Sys Contractor Test Support Sys 2.104 Trainsportation 2.105 New Equip Training (NET) 2.113 Modifications 1.359 1.317 1.176 0.767 0.334	Government Core PM						72.359
Government Core PM Government Core PM Contractor Sys Engineering/Mgmt Contractor PM Contractor PM Contractor PM Contractor PM Contractor PM Contractor PM Contractor Its 2.05 System Test and Evaluation 2.05 Government Testing FPV FPV FPV FPV Corrosion Testing Comparison Test PVT Refurb IOT&E Contractor Test Support Contractor Test Support SSP Contractor Test Support SSP 2.104 Initial Spares/Consumables 2.105 New Equip Training (NET) 2.13 Modifications 2.13 Modifications 2.13 Modifications Contractor PM Contractor P	GOVERNMENT CORE PM						66.012
Contractor System Test and Evaluation 2.042 Contractor Sys Engineering/Mgmt Contractor ILS 2.05 System Test and Evaluation 2.051 Government Testing FPVI FPVI Corrosion Testing OTRE Contractor Testing OTRE Contractor Testing Contractor Test Support System Contractor Test Support Contractor Test Support System Contractor Test Support Contractor T							2.157
2.042 Contractor Sys Engineering/Mgmt Contractor ILS Contractor ILS 2.05 System Test and Evaluation 2.051 Government Testing FPVI Corrosion Testing IOT&E 2.052 Contractor Testing Comparison Test PVT Refurb Contractor Test Support - IOT&E Contractor Test Support SSP 2.101 Initial Spares/Consumables 2.104 Transportation 2.105 New Equip Training (NET) 2.113 Modifications 1.359 1.317 1.176 0.767 0.334							1.896
2.05 System Test and Evaluation 2.05 System Test and Evaluation 2.05 Government Testing EPVI Corrosion Testing FPVI Corrosion Testing IOT&E 2.05 Contractor Testing Comparison Test PVT Refurb Contractor Test Support - IOT&E Contractor Test Support SSP 2.10 Fielding 2.105 New Equip Training (NET) 2.13 Modifications 2.13 Modifications 2.13 Modifications 2.147 1.176 0.767 0.334 2							61.959
IOT&E 1.359 1.317 1.176 0.767 0.334 2	2.042 (6.347
101&E 101&E 101&E 1.359 1.317 1.176 0.767 0.334	Contractor PM						2 138
IOTRE 1.359 1.317 1.176 0.767 0.334	Contractor ILS						4.208
IOTRE 1.359 1.317 1.176 0.767 0.334	L T T T T T T T T T T T T T T T T T T T						
Second Testing Second Testing Second Testing Aparison Test Second Test Support - IOT&E Tractor Test Support Tractor Test Suppo	2.03 System lest and Evaluation						14.070
osion Testing &E Contractor Testing parison Test Refurb &E Refurb Itractor Test Support - IOT&E Itractor Test Support Itractor Te	2.051 Government Testing						10.028
osion Testing SE Contractor Testing sparison Test Refurb Refurb Refurb Itractor Test Support - IOT&E Itractor Test Support Spares/Consumables portation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334 2	FPVI						0.079
osion Testing &E Contractor Testing parison Test Refurb &E Refurb tractor Test Support - IOT&E tractor Test Support bordation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334 2	PVT						0.00
Se Contractor Testing parison Test Refurb Refurb tractor Test Support - IOT&E tractor Test Support Consumables portation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334 2	Corrosion Testina						606.0
Sontractor Testing parison Test Refurb Refurb tractorTest Support - IOT&E tractor Test Support tractor Test Suppor	101&F						1.285
Spares/Consumables portations 1.359 1.317 1.176 0.767 0.334	O DEO Contractor Teefing						1.754
Refurb Refurb tractorTest Support - IOT&E tractor Test Support tractor T	2.032 Contractor Testing						4.042
Keturb KE Refurb tractor Test Support - IOT&E tractor Test Support Captarion Equip Training (NET) 1.359 1.317 1.176 0.767 0.334 2	Comparison lest						1.140
SE Refurb tractorTest Support - IOT&E tractor Test Support tractor Test	PV Refurb						1 291
tractor Test Support - IOT&E tractor Test Support tractor Test Support tractor Test Support Spares/Consumables portation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334	IOT&E Refurb						0.482
tractor Test Support Spares/Consumables portation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334	ContractorTest Support - IOT&E						0.40
Spares/Consumables portation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334	Contractor Test Support						0.124
Spares/Consumables portation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334	do.						0.635
Spares/Consumables portation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334							0.369
Spares/Consumables portation Equip Training (NET) 1.359 1.317 1.176 0.767 0.334	2.10 Fielding						100
on Training (NET) 1.359 1.317 1.176 0.767 0.334	2 101 Initial Spares/Consumables						79.087
on Fraining (NET) 1.359 1.317 1.176 0.767 0.334	2.101 Illinai Opalas/Collodillables						1.102
Fraining (NET) 1.359 1.317 1.176 0.767 0.334	2.104 Iransportation						23.854
1.359 1.317 1.176 0.767 0.334	2.105 New Equip Training (NET)						1.131
1.359 1.317 1.176 0.767 0.334							
	2.13 Modifications	1.359	1.317	1.176	0.767	0.334	23.119

Logistics Vehicle System Replacement (LVSR) - HT (MYP) Procurement Funded Elements

Escalated Dollars in Millions

		<u>a</u> .	Page 1 of 3							
	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
2.0 Procurement Funded Elements	36.266	71.409	277.718	289.981	293.414	4.090	0.988	1.010	1.032	1.055
2.02 Recurring Production	30.096	48.379	244.347	253.594	256.431					
Z.UZ1 Manufacturing	30.096	48.379	244.347	253.594	256.431					
Mk48	12.638	23.485	134.403	139.818	142.890					
MK14	2.540	5.900	27.013	24.651	27.208					
Mk15	3.953	1.188	13.357	6.205	2.029					
Mk16	2.841	5.082	17.806	16.682	24.642					
Mk17	2.870	3.385	20.755	23.570	25.774					
MK18	5.253	9.338	31.013	42.669	33.888					
2.03 Engineering Changes	0.932	1.501	7.577	7.863	7.954					
2.04 System Engineering/MGMT	4.463	6.510	20.047	20.890	21.157	0.979				
2.041 Government Sys Engineering/Mgmt	3.019	5.324	18.835	19.652	19.891	0.979				
Government Core PM	0.340	0.348	0.355	0.363	0.371	0.379				
Government Matrix Support	0.307	0.304	0.311	0.318	0.325	0.332				
	2.373	4.672	18.168	18.971	19.195	0.268				
2.042 Contractor Sys Engineering/Mgmt	1.444	1.186	1.212	1.239	1.266					
Contractor PM	0.409	0.418	0.427	0.437	0.447					
Contractor ILS	1.035	0.768	0.784	0.802	0.819					
2.05 System Test and Evaluation		13.129	0.307	0.313	0.320					
2.051 Government Testing		10.028) [)					
FPVI		0.079								
PVT		6.909								
Corrosion Testing		1.285								
IOT&E		1.754								
2.052 Contractor Testing		3.102	0.307	0.313	0.320					
Comparison Test		0.276	0.282	0.288	0.294					
PVT Refurb		1.291								
O KETULD		0.482								
ContractorTest Support - IOT&E		0.124								
Contractor Test Support		0.622	0.004	0.004	0.004					
SSP		0.306	0.021	0.021	0.022					
2.10 Fielding 2.101 Initial Spares/Consumables	0.775	1.890	5.441	7.320	7.551	3.111				
2.104 Transportation 2.105 New Equip Training (NET)	0.415	1.306	4.844	7.094	7.320	2.875				
2.13 Modifications							0.988	1.010	1.032	1.055

Logistics Vehicle System Replacement (LVSR) - HT (MYP) Procurement Funded Elements

Escalated Dollars in Millions

Page 2 of 3

2 FY23 FY24	1.311																	
FY21 FY22																		
FY20																		
FY19	1.202																	
FY18	1.176																	
	1.151																	
	1.126																	4
FY15	1.102																	, 5
FY14	1.078																	4 077 8
2.0 Procurement Funded Flormonto		2.02 Recurring Production 2.021 Manufacturing Mk48	Mk14 Mk15	MK16 MK17	Mk18	2.03 Engineering Changes	2.04 System Engineering/MGMT 2.041 Government Sys Engineering/Mgmt Government Core PM Government Matrix Support Other Government	2.042 Contractor Sys Engineering/Mgmt Contractor PM Contractor ILS	2.05 System Test and Evaluation 2.051 Government Testing FPVI	F. Y 9	Corrosion Testing IOT&E	2.052 Contractor Testing Comparison Test	PVI Refurb IOT&E Refurb	PV I Refurb IOT&E Refurb ContractorTest Support - IOT&E	PV I Kefurb IOT&E Refurb ContractorTest Support - IOT&E Contractor Test Support SSP	PV1 Keturb IOT&E Refurb ContractorTest Support - IOT&E Contractor Test Support SSP 2.10 Fielding 2.101 Initial Spares/Consumables 2.104 Transportation	PVI Refurb IOT&E Refurb ContractorTest Support - IOT&E Contractor Test Support SSP 2.10 Fielding 2.101 Initial Spares/Consumables 2.104 Transportation 2.105 New Equip Training (NET)	PVI Refurb IOT&E Refurb Contractor Test Support - IOT&E Contractor Test Support SSP 2.10 Fielding 2.101 Initial Spares/Consumables 2.105 New Equip Training (NET) 2.13 Modifications

Logistics Vehicle System Replacement (LVSR) - HT (MYP) Procurement Funded Elements

Escalated Dollars in Millions

Page 3 of 3

	70	Š		i			
2.0 Procurement Funded Floments	F125	FY26	FY27	FY28	FY29	FY30	TOTAL
	1.369	1.400	1.355	1.209	0.789	0.344	996.681
2.02 Recurring Production							
2.021 Manufacturing							832.847
9							832.847
0+1101							AE2 22E
MK14							400.200
Mk15							87.312
Mk16							26.732
Mk17							67.053
2 TAN W							76.354
							122.161
2.03 Engineering Changes							25.828
2.04 System Engineering/MGMT							
2.041 Government Svs Engineering/Mamt							74.046
Government Core PM							67.700
Government Matrix Supract							2.157
Other Government							1.896
							63.647
_							6 347
Contractor PM							0.00
Contractor ILS							2.138
							4.208
2.05 System Test and Evaluation							
2.051 Government Testing							14.070
FPVI							10.028
PVT							0.079
Correspon Testing							6.909
							1.285
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							1 754
2.052 Contractor Testing							107.7
Comparison Test							4.042
PVT Refurb							1.140
IOT&E Refurb							1.291
Contractor Test Support - 10 T&E							0.482
							0.124
Collifactor Test Support							0.635
SSS							0.000
							0.369
2.10 Fielding							
2.101 Initial Spares/Consumables							26.087
2.104 Transportation							1.102
2.105 New Equip Training (NET)							23.854
							-
2.13 Modifications	1.369	1.400	1.355	1.209	0.789	0.344	23.803

2.021 Recurring Production - Manufacturing

Description:

This element includes the costs of material, labor and other expenses incurred with the tasks of teardown, rebuild, reassemble, and integration of the various subassemblies into a working vehicle system.

Assumptions:

There will be no new production facilities.

Methodology:

Manufacturing costs were developed using a 5-single year procurement (SYP) approach and a multiyear procurement (MYP) approach. Each procurement approach was applied to the "limited tech" (LT) version of the LVSR and the "high tech" (HT) version of the LVSR.

The derivation of the manufacturing cost (for both procurement approaches) was divided into three areas: 1) the component cost for the new/upgraded parts; 2) the cost to rebuild/rework; and 3) the cost to teardown and reassemble.

- 1) New component costs for each version/alternative were obtained from the Nevada Automotive Test Center (NATC).
- 2) All parts that are not being upgraded or replaced will be rebuilt during the manufacturing process. Rebuild costs were developed using the Army Master Data File (AMDF) price (with the surcharge removed) for each component and applying a 65% rebuild factor.
- 3) Teardown hours were developed from an analogy to the MTVR program, and adjusted to reflect the estimated effort required for the LVSR program. Reassembly hours were developed from the direct labor hours associated with the LVS/HEMTT Family Contract.

For the MYP approach a multiyear procurement savings of 5.7% was developed from a Naval Center for Cost Analysis white paper reviewing multiyear proposals.

The multiyear procurement savings was applied against the new component costs only.

2,03 Engineering Changes

Description:

This element includes the costs of official alterations made to a system while it is still in the manufacturing process. Modifications which change the performance of the system are done after the system is accepted by the Marine Corps will be costed in modifications.

Assumptions:

Methodology:

The total engineering changes were computed as a percentage of the total manufacturing cost (less MYP %). This factor is an engineering estimate based on previous experience with other programs.

2.041 System Engineering/Program Management - Government

Description:

This element includes the procurement-funded costs of the government PM office and the government matrix support for system engineering and business management of the system/program. The government matrix support includes: engineering support, quality assurance, ILS, maintenance, material management, acquisition and readiness.

Assumptions:

Methodology:

Both the core PM and the matrix support costs were derived from the LSV program and adjusted to reflect the requirements of the LVSR program.

Resulting cost includes three manyears in the core PM and six manyears for support.

2.042 System Engineering/Program Management - Contractor

Description:

This element includes the procurement-funded costs of the contractor PM office for system engineering and technical control, as well as the business management of the system/program. It also includes the contractor ILS effort during procurement.

Assumptions:

Methodology:

The contractor PM cost was developed as a cost per month and applied to the procurement contract period of performance. The contractor PM cost per month was based on analogy to the MTVR program.

Contractor ILS cost based on an analogy to the HEMTT Cost for Initial key personnel training is included in cost.

2.051 System Test and Evaluation - Government

Description:

Government testing includes:

- First Production Vehicle Inspection (FPVI)
- Production Verification Test (PVT)
- Corrosion testing
- Initial Operational Test and Evaluation (IOT&E)

Assumptions:

- FPVI will utilize 3 vehicles.
- PVT includes performance and RAM testing and will utilize 3 vehicles of each variant. One vehicle of each variant will undergo performance testing and two vehicles of each variant will undergo endurance testing.
- Corrosion testing will utilize 1 vehicle.
- IOT&E will utilize 15 vehicles; 3 MK48/14, 2 MK48/15, 5 MK48/16, and 5 MK48/18.

Methodology:

- FPVI and corrosion test costs were derived from the FMTV program and adjusted for the quantity of test vehicles.
- PVT performance test cost was derived from the 5T ESP program. PVT endurance test cost was based on a per vehicle average test cost for the 5T ESP, SLEP 2-1/2T and PLS programs.
- IOT&E test cost was based on analogy to the MTVR program.

System Test and Evaluation - Contractor 2.052

Description:

Contractor testing includes:

- Comparison testing
- Production Verification Test (PVT) refurbishment
- Initial Operational Test and Evaluation (IOT&E) refurbishment
- Contractor test support for IOT&E, comparison testing, and First Article Testing (FAT)
- System support package for comparison testing and FAT.

Assumptions:

- Comparison testing will start the second year of production and one test will be performed for each subsequent production buy.
- PVT includes performance and RAM testing and will utilize 3 vehicles of each variant.
- IOT&E will utilize 15 vehicles; 3 MK48/14, 2 MK48/15, 5 MK48/16, and 5 MK48/18.

Methodology:

- Contractor comparison test cost was based on analogy to the 5T ESP and LSV programs.
- PVT and IOT&E refurbishment costs were computed by applying a refurbishment factor to the current LVSA1 manufacturing cost.
- Contractor test support for IOT&E was developed as a cost per month based on analogy to the LSV program. Contractor test support cost for FAT and comparison test were based on analogy to the 5T ESP and LSV programs.
- The SSP cost was based on a SSP factor applied to the FAT and comparison test costs.
- The SSP cost related to both the PVT and IOT&E was included in testing (cell 2.051).

2.101 Initial Depot Level Reparables

Description:

This element includes the cost for initial spare components necessary to fill initial ASL stockage to support end-item fielding throughout the system life cycle.

Assumptions:

- One ASL package will be fielded to each of three sites.
- Only those new components not available in the supply system will be included in the ASL package.
- Two of each component will be required per ASL package.
- The ASL package will be funded one year prior to fielding.

Methodology:

The cost of the ASL package is based on component costs provided by the Nevada Automotive Test Center (NATC).

2.104 Transportation

Description:

This element includes the procurement-funded costs of moving the vehicles to the contractor for remanufacturing and fielding the vehicles to the units.

Assumptions:

Methodology:

An average transportation cost per year was applied against the production and fielding schedules. The cost of transporting vehicles to the contractor for remanufacturing will occur from FY04 through FY08. The cost of transporting vehicles to the unit for fielding will occur from FY05 through FY09.

New Equipment Training (NET) 2,105

Description:

This element includes the system-specific, procurement-funded costs of training services for new equipment training through which personnel will acquire sufficient concepts, skills, and aptitudes to maintain the remanufactured vehicle system with maximum efficiency.

Assumptions:

Only contractor personnel were included in NET. NET will be required at each of the three training sites.

Methodology:

Total new equipment training cost includes contractor maintenance training and trainer's travel. Number of trips; duration of trips; and travel cost per trip based on analogy to the MTVR program. Contractor's salary per trip derived from PLS and FMTV contract data.

Modifications 2.13

Description:

This element includes the procurement-funded costs of the labor and material associated with any approved alteration made to a system by accomplishing a Modification Work Order (MWO), retrofit, conversion, remanufacture, or engineering change after fielding by the Marine Corps.

Assumptions:

Methodology:

The modification cost was computed as a percentage of the total manufacturing cost (less MYP %). The modification factor is based on historical data from a range of vehicles (5T to 10 T trucks) .

APPENDIX C

LVSR

Total OMMC Costs by Year in Escalated Dollars

OMMC - Cost Data Sheets

Logistics Vehicle System Replacement (LVSR) Operations and Maintenance Funded Elements

Escalated Dollars in Millions Page 1 of 3

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
5.0 O&M Funded Elements								2	2
with Rebuild	1.865	6.110	16,662	19.224	22 216	207 702	.,,		
without Rebuild	1.865	6.110	16 662	70007	22.240	22.133	23.345	23.911	24.491
		2	70000	13.224	47.77	22.793	23.345	23.911	24.491
5.03 Repl Spares (Repairables)	0.183	0.562	1.426	1.683	1.923	1 969	2 044	c	
Mk48/14	0.052	0 199	0 551		1 0	0 1	5.0	7.000	4.116
Mk48/15	1 0000	- 0	100.0	0.020	0.725	0.743	0.761	0.779	0.798
Mt48/16	0.032	0.064	0.109	0.129	0.132	0.135	0.138	0.142	0.145
01/04/01	0.026	0.079	0.193	0.218	0.272	0.278	0.285	0 202	0000
MK48/1/	0.013	0.042	0.122	0.148	0.178	0.182	0.187	0.191	25.0
MK48/18	090:0	0.177	0.451	0.558	0.616	0.631	0.646	0.661	0.130
5.04 Repl Repair Parts (Consumables)	0.858	2.459	6.065	7.196	8 248	777	ō	6	•
Mk48/14	0.157	0.805	1 675		2 4 6	÷ ;	0.021	8.830	9.044
Mk48/15	0 0 0	50.0	0.10.1	4.8.1	2.204	2.257	2.312	2.368	2.425
M1340146	0.278	0.554	0.940	1.113	1.139	1.167	1.195	1.224	1 254
INIX40/ IO	0.090	0.281	0.683	0.772	0.962	0.985	1.009	1 033	1052
NIK48/1/	0.150	0.480	1.396	1.702	2.043	2.092	2 143	2 105	000
MK48/18	0.183	0.539	1.371	1.696	1 871	1 916	1062	2.133	2.240
					-	0	706.1	2.010	2.059
5.05 Petro, Oil and Lub (POL)	0.815	3.078	9.159	10.333	12.063	12.355	12.654	12.961	13 275
5.06 End Item Sun & Maint - Rebuild									, ,
Mk48									
0									
1VIK 14									
Mk15									
MK16									
Mk17									
MK18									
5.07 Transportation - Rebuild									
5.10 Systems Engineering/Mgmt	0.009	0.011	0.012	0.012	0.012	0.052	640	1	•
			!	· >	7	70.0	0.053	0.055	0.056

Logistics Vehicle System Replacement (LVSR) Operations and Maintenance Funded Elements

Escalated Dollars in Millions Page 2 of 3

	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22
5.0 O&M Funded Elements									
with Rebuild	25.085	50.861	86.338	181.332	187.070	149.311	28.973	29.678	30.401
without Rebuild	25.085	25.694	26.318	26.956	27.612	28.284	28.973	29.678	30.401
5.03 Repl Spares (Repairables)	2.167	2.220	2.274	2.329	2.385	2.444	2.503	2.564	2.626
MK48/14	0.818	0.837	0.858	0.879	0.900	0.922	0.944	0.967	0.991
MK48/15	0.149	0.152	0.156	0.160	0.164	0.167	0.172	0.176	0.180
MK48/16	0.306	0.314	0.321	0.329	0.337	0.345	0.354	0.362	0.371
MK48/17	0.201	0.206	0.211	0.216	0.221	0.226	0.232	0.238	0.243
Mk48/18	0.694	0.711	0.728	0.746	0.764	0.782	0.802	0.821	0.841
5.04 Repl Repair Parts (Consumables)	9.263	9.488	9.718	9.954	10.197	10.445	10.699	10.959	11.226
MK48/14	2.484	2.544	2.606	2.669	2.734	2.801	2.869	2.939	3.010
Mk48/15	1.284	1.316	1.348	1.380	1.414	1.448	1.483	1.520	1.557
MK48/16	1.084	1.110	1.137	1.165	1.193	1.222	1.252	1.282	1.313
MK48/17	2.302	2.358	2.416	2.474	2.534	2.596	2.659	2.724	2.790
Mk48/18	2.109	2.160	2.212	2.266	2.321	2.377	2.435	2.495	2.555
5.05 Petro, Oil and Lub (POL)	13.597	13.927	14.265	14.612	14.967	15.331	15.705	16.087	16.479
5.06 End Item Sup & Maint - Rebuild		24.017	57.321	147.576	152.505	117.441			
MK48		12.371	34.054	91.177	94.726	72.858			
MK14		2.185	6.188	14.700	14.091	11.462			
MK15		2.072	2.005	5.798	2.598	0.760			
Mk16		2.287	4.768	10.025	10.707	10.788			
Mk17		1.944	4.230	11.724	13.315	10.831			
Mk18		3.157	6.076	14.153	17.068	10.742			
5.07 Transportation - Rebuild		1.150	2.699	6.800	6.953	3.585			
5.10 Systems Engineering/Mgmt	0.057	0.059	090.0	0.062	0.063	0.065	0.066	0.068	0.069

Logistics Vehicle System Replacement (LVSR) Operations and Maintenance Funded Elements

Escalated Dollars in Millions Page 3 of 3

	FY23	FY24	FY25	EVae	1	í	i		
5.0 O&M Funded Elements				1 1 20	L12/	FY28	FY29	FY30	TOTAL
with Rebuild	24 140	700	0	;					
without Rebuild	2t1.10	205.16	32.581	33.478	31.149	24.790	7.744	4.269	1126 820
	31.142	31.902	32.681	33.478	31.149	24.790	7.744	4.269	606 773
5.03 Repl Spares (Repairables)	c						•	2	000.1.3
MILADIAA	0.69.7	7.756	2.823	2.892	2.653	2.083	0.690	0 329	50 370
#1 /O#VIA	1.015	1.040	1.065	1.091	1.030	0.807	0.238	0.00	04:313
MK48/15	0.184	0.189	0.194	0.198	0 149	8000	0.000	0.133	19.772
Mk48/16	0.380	0.390	0 300		1 - 0	0.00	0.029		3.541
Mk48/17		0.00	0.533	0.409	0.375	0.294	0.112	0.080	7.422
0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	0.249	0.255	0.262	0.268	0.252	0.210	0.082	0.043	1 876
01/0+01/	0.862	0.883	0.904	0.926	0.847	0.671	0.230	0.073	16.762
5.04 Repl Repair Parts (Consumables)	11.500	14 784	77	9					
Mk48/14			12.000	12.362	11.210	8.804	3.000	1.404	223.786
**************************************	3.084	3.159	3.236	3.315	3.130	2.453	0.723	0.404	60 077
INIX46/13	1.595	1.633	1.673	1.714	1.284	0.859	0.748	101.0	00.01
MK48/16	1.346	1.378	1,412	1 446	1 320	0 70	0.240		30.621
Mk48/17	2 858	0000	000	0 1	1.023	1.042	0.396	0.282	26.262
Mk48/18	2.000	7.920	3.000	3.073	2.893	2.410	0.934	0.496	55 896
	2.618	2.682	2.747	2.814	2.573	2.039	0.700	0.222	50.930
5.05 Petro, Oil and Lub (POL)	16.881	17.292	17.715	18.146	17.208	13.823	3 974	2 452	7
5 06 End from Sun 8 Major Date:							-	704.7	529.151
MAZO									030 001
WIR40									130.000
MK14									305.186
Mk15									48.626
Mk16									13.234
MK17									38.575
0.00									NNO CN
0									10.7
									51.195
5.07 Transportation - Rebuild									7
5 10 Systems Engineering (Marm)									71.188
	0.071	0.073	0.075	0.077	0.078	0.080	0.082	0.084	1.462

5:03 Replenishment Spares (Reparables)

Description:

This element includes the O&M costs of purchasing the reparables required to resupply initial stockage and the reparables required on a recurring basis for the repair of major end items.

Assumptions:

Methodology:

Replenishment spares total cost was computed as a reparables cost per mile applied against each variant's OPTEMPO and operating schedule, as represented on pages 3 and 6, respectively. The reparables cost per mile was based on actuals for the LVS.

There was no significant difference in the two LVSR configurations: LT and HT.

5.04 Replenishment Repair Parts (Consumables)

Description:

This element includes the O&M costs of purchasing the consumables required to resupply initial stockage and the consumables required on a recurring basis for the repair of major end items.

Assumptions:

Methodology:

Replenishment repair parts total cost was computed as a consumables cost per mile applied against each variant's OPTEMPO and operating schedule, as represented on pages 3 and 6, respectively.

The consumables cost per mile was based on actuals for the LVS.

There was no significant difference in the two LVSR configurations: LT and HT.

5.05 PETROLEUM, OILS AND LUBRICANTS (POL)

Description:

This element includes the costs of fuel, oil and lubricants for the system.

Assumptions:

The USMC will use a DF-2 diesel fuel.

Methodology:

Fuel capacity and range based on original LVS.

POL cost per mile was applied against each variants OPTEMPO and number of operating vehicles.

5.06 End Item Supply & Maintenance - Rebuild

Description:

This element includes the costs of material, labor, and overhead for the rebuild of the basic end item and associated components.

Assumptions:

Each variant wil be rebuilt after 10 years of service.

Methodology:

The rebuild cost for each variant was based on analogy to the current rebuild cost for the LVS. There was no significant difference in the two LVSR configurations: LT and HT.

5.07 Transportation - Rebuild

Description:

This element includes the cost of transporting the vehicles for rebuild.

Assumptions:

The Reserve Stores vehicles will not incur any cost for transportation because these vehicles reside at the rebuild site.

Methodology:

An average transportation cost per year was applied against the rebuild schedule.

5.10 Systems Engineering Management

Description:

Systems Engineering Management includes the O&M-funded costs of continuing support to the weapon system. Included in systems engineering are the offices of readiness and material management.

Assumptions:

Methodology:

The system engineering management cost was derived from the LSV program and adjusted to reflect the requirements of the LVSR program.